

U.S. Application No. 10/067,486

Attorney Docket No. 09792909.5361

AMENDMENTS TO THE CLAIMS:

1.-17. (Canceled)

B/

18. (Currently Amended) A method ~~for~~ of making a semiconductor substrate comprising:
~~a variant layer forming step for~~ forming a variant impurity layer with an impurity concentration
varying in the a depth direction on one surface of a supporting substrate by means other than anodic
oxidation; and
~~a porous layer forming step for~~ forming a porous layer by providing pores in the variant impurity
layer by anodic oxidation so that ~~the~~ a porosity in the porous layer varies in the depth direction.

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19. (Currently Amended) A method ~~for~~ of making a semiconductor substrate according to Claim
18, wherein a variant impurity layer including at least two sublayers having different impurity
concentrations is formed in said variant layer forming step, and a porous layer including at least two
sublayers having different porosities is formed in said porous layer forming step.

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20. (Currently Amended) A method ~~for~~ of making a semiconductor substrate according to Claim
19, wherein at least two sublayers having different impurity concentrations ~~is~~ are formed on one surface
of the supporting substrate in said variant layer forming step.

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21. (Currently Amended) A method ~~for~~ of making a semiconductor substrate according to Claim
19, wherein, in said variant layer forming step, a growth layer is deposited on one surface of the
supporting substrate, and then an impurity is diffused into the growth layer so as to form at least two
sublayers having different impurity concentrations.

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22. (Currently Amended) A method ~~for~~ of making a semiconductor substrate according to claim 18, wherein, in said variant layer forming step, said variant impurity layer comprises a semiconductor selected from the group consisting of a semiconductor containing at least one of silicon and germanium, a semiconductor containing gallium and arsenic, and a semiconductor containing gallium and phosphorous, and a semiconductor containing gallium and nitrogen.

B) X 23. (Currently Amended) A method ~~for~~ of making a semiconductor substrate according to claim 18, wherein, in said variant layer forming step, a low-impurity sublayer comprising a semiconductor having a low impurity concentration is formed and a high-impurity sublayer comprising a semiconductor having a high impurity concentration is formed on the surface, away from the supporting substrate, of the low-impurity sublayer.

X 24. (Currently Amended) A method ~~for~~ of making a semiconductor substrate according to claim 23, wherein, in said variant layer forming step, each of said supporting substrate and said variant impurity layer comprises p-type silicon containing a p-type impurity, the low-impurity sublayer has a p-type impurity concentration of $1 \times 10^{19} \text{ cm}^{-3}$ or more, and the high-impurity sublayer has a p-type impurity concentration of less than $1 \times 10^{19} \text{ cm}^{-3}$.

25. (Currently Amended) A method ~~for~~ of making a semiconductor substrate according to claim 18, wherein said one surface of the supporting substrate is uneven.

X 26. (Currently Amended) A method ~~for~~ of making a semiconductor substrate according to claim 18, further comprising a step for forming a semiconductive thin film on the surface, away from the supporting substrate, of the porous layer.

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X 27. (Currently Amended) A method ~~for~~ of making a semiconductor substrate according to claim 26, wherein said semiconductive thin film is formed of a single crystal provided by epitaxial growth.

B/ X 28. (Currently Amended) A method ~~for~~ of making a semiconductor substrate according to claim 26, wherein said semiconductive thin film comprises a semiconductor selected from the group consisting of a semiconductor containing at least one of silicon and germanium, a semiconductor containing gallium and arsenic, and a semiconductor containing gallium and phosphorus, and a semiconductor containing gallium and nitrogen.

X 29. (Currently Amended) A method ~~for~~ of making a semiconductor substrate according to claim 18, further comprising a heating step of heating the porous layer for recrystallization.

103 30. (Currently Amended) A method ~~for~~ of making a semiconductor substrate comprising:
~~a high-impurity layer forming step for forming a high-impurity layer comprising a semiconductor~~
having an impurity concentration of $1 \times 10^{18} \text{ cm}^{-3}$ or more on one surface of a supporting substrate by
means other than anodic oxidation; and
~~a porous layer forming step for forming pores in the high-impurity layer by anodic oxidation to~~
form a porous layer having different porosities in ~~the~~ a depth direction.

31. (Currently Amended) A method ~~for~~ of making a semiconductor substrate according to claim 30, wherein in said high-impurity layer forming step, the high-impurity layer is formed by epitaxial growth.

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32. (Currently Amended) A method ~~for~~ of making a thin-film semiconductive member comprising:

~~a variant layer forming step for forming a variant impurity layer with an impurity concentration varying in the a depth direction on one surface of a supporting substrate~~ by means other than anodic oxidation;

~~a porous layer forming step for forming a porous layer by providing pores in the variant impurity layer by anodic oxidation so that the a porosity in the porous layer varies in the a depth direction;~~

~~a step for forming a semiconductive thin film on the surface, away from the supporting substrate, of the porous layer; and~~

~~a separation step for separating the semiconductive thin film from the supporting substrate by cleavage in the a porous phase.~~

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33. (Currently Amended) A method ~~for~~ of making a thin-film semiconductive member comprising:

~~a high impurity layer forming step for forming a high-impurity layer comprising a semiconductor having an impurity concentration of $1 \times 10^{18} \text{ cm}^{-3}$ or more on one surface of a supporting substrate~~ by means other than anodic oxidation;

~~a porous layer forming step for forming pores in the high-impurity layer by anodic oxidation to form a porous layer having different porosities in the a depth direction;~~

~~a step for forming a semiconductive thin film on the surface, away from the supporting substrate, of the porous layer; and~~

~~a separation step for separating the semiconductive thin film from the supporting substrate by cleavage in the a porous phase.~~